

In the Claims:

Please amend the claims as follows:

Claims 1-18 (Cancelled)

Claim 19 (New): A method of manufacturing a semiconductor device comprising:
forming a semiconductor film having a thickness between 150 and 1000 Å over a substrate;
emitting pulse laser beams at a rate of N times per second;
shaping the pulse laser beams into beams elongated in one direction at an irradiation surface through an optical system, the beams having a normal-distribution type energy profile of width L (m) perpendicular to the direction, and the beams having substantially a constant energy distribution along the direction;
applying the beams to an arbitrarily selected portion of the semiconductor film; and
scanning the semiconductor film with the beams perpendicular to the direction at a speed V (m/s),
wherein the number of beams applied to the arbitrarily selected portion in one scan satisfies a relationship $3 \leq LN/V \leq 100$, and
wherein the width L (m) is defined as beams in a region having 5% or more of an energy density with respect to a maximum energy density of the beams on the irradiation surface.

Claim 20 (New): The method of claim 19 wherein the width is between 0.1 and 1 cm.

Claim 21 (New): The method of claim 19 wherein the beams along the direction has a length between 10 and 30 cm.

Claim 22 (New): The method of claim 19 wherein the scanning step is conducted in air.

Claim 23 (New): A method of manufacturing a semiconductor device comprising:

forming a semiconductor film having a thickness between 150 and 1000 Å over a substrate;

emitting pulse laser beams at a rate of N times per second;

shaping the pulse laser beams into beams elongated in one direction at an irradiation surface through an optical system, the beams having a normal-distribution type energy profile of width L (m) perpendicular to the direction, and the beams having substantially a constant energy distribution along the direction, and an average single-pulse energy density of the beams between 100 and 500 mJ/cm²;

applying the beams to an arbitrarily selected portion of the semiconductor film; and

scanning the semiconductor film with the beams perpendicular to the direction at a speed V (m/s),

wherein the number of beams applied to the arbitrarily selected portion in one scan satisfies a relationship $3 \leq LN/V \leq 100$, and

wherein the width L (m) is defined as beams in a region having 5% or more of an energy density with respect to a maximum energy density of the beams on the irradiation surface.

Claim 24 (New): The method of claim 23 wherein the width is between 0.1 and 1 cm.

Claim 25 (New): The method of claim 23 wherein the beams along the direction has a length between 10 and 30 cm.

Claim 26 (New): The method of claim 23 wherein the scanning step is conducted in air.

Claim 27 (New): A method of manufacturing a semiconductor device comprising:

forming a semiconductor film having a thickness between 150 and 1000 Å over a substrate;

emitting pulse laser beams at a rate of N times per second;

shaping the pulse laser beams into beams elongated in one direction at an irradiation surface through an optical system, the beams having a normal-distribution type energy profile of

width L (m) perpendicular to the direction, and the beams having substantially a constant energy distribution along the direction;

applying the beams to an arbitrarily selected portion of the semiconductor film; and

scanning the semiconductor film with the beams perpendicular to the direction at a speed V (m/s),

wherein the pulse laser comprises an excimer laser,

wherein the number of beams applied to the arbitrarily selected portion in one scan satisfies a relationship $3 \leq LN/V \leq 100$, and

wherein the width L (m) is defined as beams in a region having 5% or more of an energy density with respect to a maximum energy density of the beams on the irradiation surface.

Claim 28 (New): The method of claim 27 wherein an average single-pulse energy density of the beams is between 100 and 500 mJ/cm².

Claim 29 (New): The method of claim 27 wherein the width is between 0.1 and 1 cm.

Claim 30 (New): The method of claim 27 wherein the beams along the direction has a length between 10 and 30 cm.

Claim 31 (New): The method of claim 27 wherein the scanning step is conducted in air.

Claim 32 (New): A method of manufacturing a semiconductor device comprising:

forming a semiconductor film having a thickness between 150 and 1000 Å over a substrate;

emitting pulse laser beams at a rate of N times per second;

shaping the pulse laser beams into beams elongated in one direction at an irradiation surface through an optical system, the beams having a trapezoidal energy profile of width L (m) perpendicular to the direction, and the beams having substantially a constant energy distribution along the direction;

applying the beams to an arbitrarily selected portion of the semiconductor film; and
scanning the semiconductor film with the beams perpendicular to the direction at a speed
V (m/s),

wherein the number of beams applied to the arbitrarily selected portion in one scan
satisfies a relationship $3 \leq LN/V \leq 100$, and

wherein the width L (m) is defined as beams in a region having 5% or more of an energy
density with respect to a maximum energy density of the beams on the irradiation surface.

Claim 33 (New): The method of claim 32 wherein the width is between 0.1 and 1 cm.

Claim 34 (New): The method of claim 32 wherein the beams along the direction has a
length between 10 and 30 cm.

Claim 35 (New): The method of claim 32 wherein the scanning step is conducted in air.

Claim 36 (New): A method of manufacturing a semiconductor device comprising:
forming a semiconductor film having a thickness between 150 and 1000 Å over a
substrate;

emitting pulse laser beams at a rate of N times per second;

shaping the pulse laser beams into beams elongated in one direction at an irradiation
surface through an optical system, the beams having a trapezoidal energy profile of width L (m)
perpendicular to the direction, and the beams having substantially a constant energy distribution
along the direction, and an average single-pulse energy density of the beams between 100 and
500 mJ/cm²;

applying the beams to an arbitrarily selected portion of the semiconductor film; and
scanning the semiconductor film with the beams perpendicular to the direction at a speed
V (m/s),

wherein the number of beams applied to the arbitrarily selected portion in one scan
satisfies a relationship $3 \leq LN/V \leq 100$, and

wherein the width L (m) is defined as beams in a region having 5% or more of an energy density with respect to a maximum energy density of the beams on the irradiation surface.

Claim 37 (New): The method of claim 36 wherein the pulse laser comprises an excimer laser.

Claim 38 (New): The method of claim 36 wherein the width is between 0.1 and 1 cm.

Claim 39 (New): The method of claim 36 wherein the beams along the direction has a length between 10 and 30 cm.

Claim 40 (New): The method of claim 36 wherein the scanning step is conducted in air.

Claim 41 (New): A method of manufacturing a semiconductor device comprising:
forming a semiconductor film having a thickness between 150 and 1000 Å over a substrate;

emitting pulse laser beams at a rate of N times per second;

shaping the pulse laser beams into beams elongated in one direction at an irradiation surface through an optical system, the beams having a trapezoidal energy profile of width L (m) perpendicular to the direction, and the beams having substantially a constant energy distribution along the direction;

applying the beams to an arbitrarily selected portion of the semiconductor film; and

scanning the semiconductor film with the beams perpendicular to the direction at a speed V (m/s),

wherein the pulse laser comprises an excimer laser,

wherein the number of beams applied to the arbitrarily selected portion in one scan satisfies a relationship $3 \leq LN/V \leq 100$, and

wherein the width L (m) is defined as beams in a region having 5% or more of an energy density with respect to a maximum energy density of the beams on the irradiation surface.

Claim 42 (New): The method of claim 41 wherein the width is between 0.1 and 1 cm.

Claim 43 (New): The method of claim 41 wherein the beams along the direction has a length between 10 and 30 cm.

Claim 44 (New): The method of claim 41 wherein the scanning step is conducted in air.